

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

**MAILED**

**SEP 13 2001**

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

**PAT. & T.M. OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Ex parte MITSUHIRO NAKAMURA, MASARU WADA, CHIHIRO UCHIBORI  
and MASANORI MURAKAMI

Appeal No. 2000-0456  
Application 08/809,463

ON BRIEF

Before HAIRSTON, JERRY SMITH and LEVY, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

ON REQUEST FOR REHEARING

Appellants request that we reconsider our decision of November 28, 2000, wherein we sustained the rejection of claims 1-19 as unpatentable under 35 U.S.C. § 103.

Appellants assert that the Board of Patent Appeals and Interferences (Board) misapprehended or overlooked specific points of fact in rendering its original decision which is grounds for reversing our decision with respect to claims 1-19.

We have reconsidered our decision of November 28, 2000 in light of appellants' comments in the request for rehearing, and we find no error therein. We, therefore, decline to make any changes in our prior decision for the reasons which follow.

Appellants' first point is to note that the claimed invention provides unexpected and improved electrode surface morphology and thermal stability by preventing the diffusion of indium to the surface of the electrode [Request, page 2]. Although evidence of unexpected results can overcome a prima facie case of obviousness, this argument was not made by appellants in their appeal briefs, and we will not consider factual evidence for the first time after a decision by the Board has been rendered.

Appellants argue that Jackson fails to recognize the diffusion problem and teaches away from the claimed invention because Jackson forms the metal contact directly on the semiconductor layer comprising indium [id., page 3]. As we noted in the original decision, however, it is not necessary that the prior art recognize the problem solved by appellants' invention. The only question is whether the references would have suggested doing what appellants have done [decision, page 9]. The alleged deficiency in Jackson is overcome by the teachings of Nirschl

which are combined with those of Jackson.

Appellants argue that there is no basis for combining the teachings of Nirschl with those of Jackson. We do not agree. As noted in our original decision, Nirschl teaches that when one is using III-V semiconductors, it is desirable to replace a single metal contact with a metallization series which includes a metal nitride because it improves ohmic contact [decision, page 8]. Thus, the artisan would have been motivated to replace the single metal contact of Jackson with a metallization series including a metal nitride to improve ohmic contact as suggested by Nirschl. The suggestion by Nirschl to replace a single metal contact with a metallization series to improve ohmic contact provides a prima facie case of the obviousness of replacing the single metal contact of Jackson with a metallization series including a metal nitride in order to improve ohmic contact. The fact that appellants added the metal nitride layer for a different reason does not, by itself, overcome a prima facie case of obviousness.

Appellants dispute the motivation to improve ohmic contact because Jackson "purposefully" forms its metal contact directly on the semiconductor layer to improve carrier flow [Request, page 4]. Although Jackson may not have appreciated that the addition of a metal nitride layer would improve the

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ohmic contact, the artisan aware of the teachings of Nirschl would have recognized the obviousness of adding a metal nitride layer to the single metal contact of Jackson.

Appellants argue that the proposed modification of Jackson to include a metal nitride layer as suggested by Nirschl would modify the carrier flow characteristics of Jackson which leads to a result that Jackson is trying to avoid [id.]. This argument raises factual inquiries which have not been previously raised in this appeal. We decline to consider these factual inquiries for the first time after the decision has been rendered.

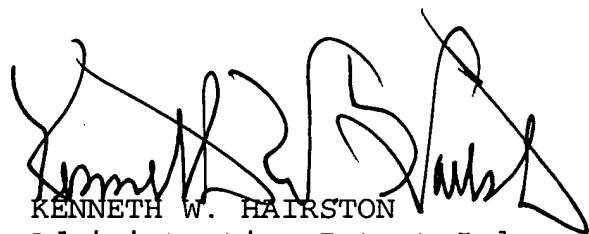
We have carefully considered the arguments raised by appellants in their request for rehearing, but we can find no errors in our original decision. We are still of the view that the invention set forth in claims 1-19 would have been obvious to the artisan in view of the collective teachings of the applied prior art.


We have granted appellants' request to the extent that we have reconsidered our decision of November 28, 2000, but we deny the request with respect to making any changes therein.

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No time period for taking any subsequent action in  
connection with this appeal may be extended under 37 CFR  
§ 1.136(a).

REHEARING DENIED

  
KENNETH W. HAIRSTON  
Administrative Patent Judge

  
JERRY SMITH  
Administrative Patent Judge

  
STUART S. LEVY  
Administrative Patent Judge

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HILL, STEADMAN & SIMPSON  
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